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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,292	02/13/2002	Toshiyuki Nagasaku	NIT-324	3497

7590

05/07/2003

Mattingly, Stanger & Malur, P.C
Suite 370
1800 Diagonal Road
Alexandria, VA 22314

EXAMINER

COX, CASSANDRA F

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/073,292

Applicant(s)

NAGASAKU ET AL.

Examiner

Cassandra Cox

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-- Th MAILING DATE of this communicati n appears n the cover sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakamoto et al. (U.S. Patent No. 6,204,739).

In reference to claim 1, Sakamoto discloses in Figure 3 an oscillator comprising: an active device (15); a substrate (which is seen to be the same as the dielectric sheet, see column 6, lines 10-15); a microstrip line (11, 12) formed on the substrate; and a dielectric block (R) disposed to couple with the microstrip line (11, 12); wherein the microstrip line and the dielectric block form a resonator, the active device and the resonator are electrically connected with each other, the active device produces a negative resistance in a desired oscillation frequency band (see column 5, line 65 through column 6, line 6), and a resonance frequency of the lowest order mode of the dielectric block is lower than the desired oscillation frequency (which is seen to be a center frequency of oscillation) and a resonance frequency band of one of the higher order modes covers the desired oscillation frequency is seen to be an inherent part of the operation of the oscillator. The desired oscillation frequency is seen to be the center operation frequency of the resonance frequency band, therefore any resonance frequency beginning below the center frequency of the resonance frequency band (lowest order mode) and ending above the center frequency of the resonance frequency band (higher order modes) would cover the desired oscillation frequency (the center frequency of the resonator frequency band). The same also applies to claims 13 (wherein it is considered to be well known in the art that an oscillator of the design mentioned above can be used in a transmitter-receiver module comprising an antenna unit electrically connected to the oscillator) and 17 (wherein it is considered to be well known in the art that an oscillator of the design mentioned above can be used in a radar system comprising a transmitter antenna electrically connected to the oscillator, a mixer

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electrically connected to the oscillator and a receiver antenna electrically connected to the mixer), of which fact official notice is taken. It is considered obvious that the oscillator could be used in various environments as called for in claims 13 and 17.

In reference to claim 2, because Sakamoto discloses in column 5, lines 66-67 that the resonator is dielectric the substrate is also seen to be a dielectric substrate. The same applies to claims 14 and 18.

In reference to claim 3, the active device, the microstrip line, and the dielectric block are mounted on the common substrate (see column 6, lines 1-16). The same applies to claims 4, 15, and 19.

In reference to claim 5, whether the active device is mounted on another substrate different from the substrate is seen to be a design expedient dependent on the particular environment and the desired outcome. The same applies to claims 6, 16, and 20.

In reference to claim 7, Sakamoto also discloses in Figure 3 a variable reactance device (16) between the active device (15) and the resonator (R), and a control of an oscillation frequency is possible by a characteristic control of the variable reactance device (16), see column 6, lines 3-6. The same applies to claims 8-12.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cassandra Cox whose telephone number is 703-306-

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5735. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:30 PM and on alternate Fridays from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (703)-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

CC

CC

May 2, 2003



TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800